

Abstract of the Disclosure

A refiner for separating and beating a material includes a conical type stationary shell including a first beating section; a ring-shaped stationary disc provided on an outer edge of the conical type stationary shell and including a second beating section; a rotational shaft; a conical type rotor attached to and supported by the rotational shaft including a third beating section facing the first beating section to create a gap between the first beating section and the third beating section for the material to pass through; and a ring-shaped rotor disc provided on an outer edge of the conical type rotor and including a fourth beating section facing the second beating section to create a gap between the second beating section and the fourth beating section for the material to pass through.